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How Can Young Adult Reproductive Health (YARH) Surveys Play a Role in Program Design and Evaluation?

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Peter Xenos is a Senior Fellow with the East-West Center's Research Program, Population and Health Studies. In response to increasing concern about adolescent risk-taking behavior in Asia, the East-West Center is coordinating a project to analyze and compare results from youth surveys in Hong Kong, Indonesia, Nepal, the Philippines, Taiwan, and Thailand. Initiated in 1998, the Asian Young Adult Reproductive Risk project is supported by the United States Agency for International Development.

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AYARR

Asian Young Adult Reproductive Risk Project

This research is a product of the East-West Center's Asian Young Adult Reproductive Risk (AYARR) project, supported by USAID through its MEASURE Evaluation Project. The AYARR project supports a research network devoted to producing an Asian regional perspective on young adult risk behaviors through secondary and cross-national comparative investigation of large-scale, household-based surveys of youth.

The project presently involves investigators and national surveys in six Asian countries. The government of **Hong Kong** (now the Hong Kong Special Administrative Region) has supported area-wide youth surveys, both household-based and in-school, in 1981, 1986, 1991, and 1996. The 1994 **Philippines'** Young Adult Fertility and Sexuality Survey (YAFS-II) was conducted by the Population Institute, University of the Philippines, with support from the UNFPA. **Thailand's** 1994 Family and Youth Survey (FAYS) was carried out by the Institute for Population and Social Research at Mahidol University, with support from the UNFPA. In **Indonesia**, the 1998 Reproduksi Remaja Sejahtera (RRS) baseline survey was funded by the World Bank and by USAID through Pathfinder International's FOCUS on Young Adults program. The RRS was carried out by the Lembaga Demografi at the University of Indonesia under the supervision of the National Family Planning Coordinating Board (BKKBN). The **Nepal** Adolescent and Young Adult (NAYA) project, which includes the 2000 NAYA youth survey, is being carried out by Family Health International and the Valley Research Group (VaRG) with support from USAID to Family Health International (FHI). The **Taiwan** Young Person Survey (TYPF) of 1994 was carried out by the Taiwan Provincial Institute of Family Planning (now the Bureau for Health Promotion, Department of Health, Taiwan) with support from the government of Taiwan.

How Can Young Adult Reproductive Health (YARH) Surveys Play a Role in Program Design and Evaluation?

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Background

My assignment is to consider the program implications of young adult reproductive health (YARH) “survey trend data.” This is a fairly precise call which I will fuzzy up a bit in order to get to some points which I feel ought to be covered in a session like this. I will consider matters carrying broader “programmatic” as well as specific “program” relevance, and I will consider YARH survey information even when not available in time series from two or more surveys. But even as I broaden my mandate in this way, I want to be precise and restrictive about what I mean by a “YARH survey.” For reasons of data quality, breadth of coverage, and potential for effective analysis, I take a proper YARH Survey to be one which is at a large and perhaps national scale, which uses a scientific sampling design to represent the entire youth cohort living in households, and which addresses a range of issues of specific relevance to youth. By this three-part definition, only DHS rounds which exclude no one from a defined youth age group (in particular, do not exclude males or the married) could be called YARH surveys.¹ I recognize that this tight definition excludes a large number of perfectly good surveys, but I want to focus on the contributions that can be made by the large-scale, more or less national surveys. In exploring this I draw upon some analysis of various DHS rounds, mainly Asian, combined with heavy involvement in five Asian large-scale surveys of youth samples looking into young adult reproductive health issues among other matters.²

Let us first look at YARH “trend data,” which I take to mean two or more YARH surveys on different dates covering the same youth population. What we have of this kind is, of course, rather limited. For Asia, which I am familiar with, we do have two Philippines surveys (YAFS-I, 1982 and YAFS-II, 1994³) and a nice series for Hong Kong (1981, 1986, 1991, 1996)⁴, and a shorter but more frequent set of benchmarks for Taiwan. There are surely some good examples like this from elsewhere in the world that I am not aware of.

A considerable number of the DHS rounds now provide repeated measurement at national scale, though these generally do not meet the YARH survey criteria I have established. Table 1 provides a summary of these. Considering only national surveys which are five or more years apart, there are 36 countries covered in this way, 19 in Africa, five in the Middle or Near East, five in Asia, and seven in Latin America. But, only seven are pairs of YARH surveys by our reckoning because they cover the entire youth cohort. Most of the remainder lack individual interviews with all males.

¹ And then only provisionally because they include very little content directed specifically to youth issues (see below).

² The surveys were all independent affairs, but recently have been drawn together in a comparative survey analysis project funded by USAID (MEASURE) and carrying the rubric “Asian Young Adult Reproductive Risk (AYARR).” Detail on all the surveys can be obtained from the project web site (<http://www.pisun2.ewc.hawaii.edu/ayarr/>). The final dissemination meeting for that project will be in Taipei, Taiwan, November 26-29, 2001. For details see the conference web site: <http://www2.eastwestcenter.org/ayarr2001/>.

³ A YAFS-III is being planned for 2002.

⁴ Hong Kong’s Adolescent Sexuality Survey (ASS) 2001 is in the field now.

The interest in repeated measurement or “trend data” in the present context relates to program evaluation using the powerful before/after or control group/treatment group evaluation design. We must therefore sadly note that in all these instances the surveys did not carry out their measurement in a well-defined program catchment area, nor were they scheduled before and after anything in particular programmatically. They don't fit neatly within a before-after, control group-treatment group framework.

The existing DHS rounds have been heavily utilized for international comparisons, and frequently are pressed into service in discussions of young adult reproductive health, if only to frame some broad issues.⁵ In these “league table” type presentations the limited range of independent variables in the DHSs is readily apparent (other limitations are mentioned below). This kind of use of the DHSs has probably run its useful course, barring the addition of more questions of specific relevance to youth, though some good analysis of change might be possible, in a comparative-static format using all or a subset of the countries listed in Table 1. At the level of analysis of single countries, the DHSs have been put to a variety of uses and are certainly good value, though frustrations result from the relatively fixed and already quite thick questionnaire. From the young adult policy and programs standpoint, the main deficiency of the DHS survey is that among all the hundreds of questions there is so little of specific relevance to youth. This missing content will be taken up throughout this paper, starting with the next section. The basic argument is that there will not easily be an effective substitute for large-scale surveys dedicated and tailored to national youth populations—tailored with respect to both design and sampling strategies and questionnaire content.

YARH Surveys are Policy Events

These large-scale surveys are like major tropical storms, or perhaps state visits by the pope. When one of these things occurs—it matters. From the long run-up toward the fieldwork with its technical committee tasks and mobilization of stakeholders, to the extended drudgery of the fieldwork, through the labors of analysis, and to the variety of dissemination activities and technical publication, many are involved—from researchers and respondents, to policy-makers and the public at large. Settings vary markedly, politically, socially and otherwise, and the process of doing one of these surveys is very much imbedded in its setting. The six AYARR Asian YARH surveys certainly do not cover all the possible interactions between survey and setting, but they do provide some interesting case material (Xenos 1990, 1997). Having participated in all stages (except the actual interviewing) of five of them, I can recall vividly the planning sessions and the press briefings and how locally specific yet remarkably general the issues were. The common feature above all others was that many people in the policy and program agencies and in the public at large, at least the civil society segment of the public, were very interested in what we were doing.

Survey Design and Survey Impact

The national YARH survey doesn't cover a program catchment area, but it does provide description, and sometimes more than description when the analysts are clever enough, about the whole population and a multiplicity of potential catchment areas and sub-groups therein. The practical limitations come from the sample size, which is large, generally, but spread all over. This means that large target groups (e.g.: out-of-school, unemployed, still-unmarried youth) with easily observed and conventionally

⁵ Among the many of these are: Population Reference Bureau (1992a, 1992b); Yinger et al. (1992); Senderowitz (1995), McDevitt et al. (1996); Alan Guttmacher Institute (1995, 1998); and Pathfinder International (1999).

measured characteristics can be described fairly nicely, while statistically rare and/or geographically delimited target groups, and especially those which are difficult to find and which have generally hidden or hard-to-measure characteristics (e.g.: the homeless with certain kinds of disability) cannot be.

A practical issue worth considering, then, is how to bridge the gap between the catchment areas and target groups that many programs are trying to reach, and the demographically notable groups (i.e., both large enough and measurable enough) best represented in large-scale surveys. As with the construction of any bridge, the trick is to build from both sides and meet in the middle. Program designers can do better at aligning their catchment areas so that sample designs can accommodate. This may mean no more than following the conventional national administrative nomenclature, for example. And, YARH survey designers can do much more to develop sampling schemes that accommodate program designs by modifying well-tested, off-the-shelf approaches such as geographic over-sampling in multi-staged designs (e.g.: disproportionate representation of the urban sector, certain kinds of district, etc.), combined with more-than-usually elaborate household screening to identify for interview the population categories of interest.

There are inherent limits to all of this, it is true. Surveys would not have listed the individuals I described earlier (the homeless disabled), and screening to identify such persons would be exceptionally difficult. Closer to the issues at hand, there is probably no practical way of listing sexually active single persons, or homosexuals—and, I am compelled to add, it is surely a good thing that there isn't. The point, though, is that much more can be done to throw a bridge across the gap, and that these efforts need not require large additional budgets. In fact, there may be some economies of scale to be had. What will be required is a cooperative approach on the part of both program managers and researchers well ahead of the actual field activities (funders can play a role here, one would think), and more than the usual amount of thinking ahead, so the links can be forged well before design features are locked in.

Strategic Use of Survey Samples

The large samples can provide small but representative sub-groups of precisely defined individuals who could not be reached as a representative group any other way. Two simple examples based on the Indonesian RRS survey, one of FOCUS' survey enterprises in which my own research organization cooperated, illustrates some basic points. The total youth sample numbers 8,080 sampled from four provinces, 20 regencies and 400 enumeration areas all over Java and the Southern part of Sumatra. Let us say that we are interested in patterns among youth of gaining information about family planning. Questions were asked about whether such information was discussed in the home, and also whether there was any presentation of such information in school. Within the total sample, 4,611 reported discussion of family planning somewhere, but only 1,921 reported that this took place in the home. Responding to another question, 2,223 reported some coverage of family planning in school. Cross-tabulating these we find the following:

	<u>Yes discussed at home</u>	<u>No, not discussed at home</u>
Yes, discussed in school	609	1,613
No, not discussed in school	1,239	3,488

Disproportionately, the Indonesian youth respondents report not having heard about family planning either at home or in school.

Other questions asked about knowledge of contraception, one method of which is use of condoms. Knowledge of any contraceptive is common and knowledge of condoms less common (4,418 and 1,512 cases, respectively). Cross tabulating, we find that 3,204 youth report knowledge of some contraceptive although they had had no communication on this in school or at home. And, 1,134 youth report knowledge of condoms despite having no school or home source for that. So, what is the nature of this knowledge, and where did it come from?

We may well want to explore such questions for a more precisely defined segment of the youth population. Continuing our example, we could focus on single, urban males, of which there are 466 in the sample who report what I will now call “street knowledge” of contraception. And there are 303 single, urban males with street knowledge of condoms. We might try to tabulate these small numbers of cases still further to gain some useful insights, but we might also want to examine the issues in considerable depth using a qualitative method such as in-depth interviews or focus groups. The survey provides a source of cases for such an investigation, but there are problems. One is the issue of confidentiality, which had been promised before the interviewing began. The survey team could perhaps ask, at the end of each interview, for permission to return for a further interview, but this strategy would work best only if all or nearly all the respondents of a given type gave their consent to this. Another problem results from one of the survey samples most compelling strengths, its geographic dispersion and coverage. It would be rather expensive to contact and interview even small numbers of these young men, much less to bring them together in groups for focus group sessions. In the Indonesian data, the 303 cases mentioned just now are spread over four provinces. Lampung has the largest number, 129. And even these young men are spread across 20 *kabupaten* and the *kabupaten* with the largest number of them has only 27.

Accidental Knowledge

Oftentimes a well constructed sample will offer up some serendipitous information, pointing to an unexpected pattern or target group. A simple illustration comes from the Asian AYARR project surveys. In the Philippines YAFS-II survey of 1994 a detailed household listing was obtained as part of the sampling scheme, and this yielded the recognition that a remarkable proportion of youth in the sample were living in households with substantial numbers of other youth. We checked this finding against the available DHS rounds for the Philippines (1993 and 1998) and in the household files for those rounds found the same result. This then led us to examine many of the available Asian DHS household files, which brought out certain general points true across all the countries (cf. Table 2), such as that 40 percent or more of all households do not have any youth, and that the households that do contain youth average 1.9 to 2.6 youth each. We also learned that only somewhere between 20 and 40 percent of youth live in households where they are the only youth there, and that 12–22 percent of all youth live in households with four or more youth. Finally, we discovered that among the Asian countries with DHS rounds Pakistan stands out with over one fourth of its youth in such youth-heavy households.⁶ These facts may well provide guidance for the design of media efforts, or service delivery. They certainly are valuable for the cost-effective design of future data collection on youth.

⁶ This probably reflects the prevalent early marriages forming youth couples, combined with multi-generational and joint family residence patterns that create large households with many youth, married and otherwise.

YARH Measurement in Questionnaires

Marital and Sexual Histories

Due to the sustained efforts of the WFS and then the DHS surveys, researchers now have some reliable equipment in the form of WFS/DHS-tested birth histories, beefed up in the DHS to become complete pregnancy rosters and then elaborated to record information on mother and child associated with each pregnancy. Other embellishments now more or less standard in such surveys give us, routinely, plausible if not completely adequate measurement of the whole set of proximate determinants.

Save for one proximate determinant, unfortunately, and it's an important one. Analysts are still not settled on how to obtain the best possible information on current marital status, and by implication on marital histories and marital exposure time. This is a core issue and impediment to effective estimation and analysis because without accurate timing data our bold new information on sexual activity cannot be allocated cleanly into pre-marital and marital components. This is not the place to explore these complex matters in great detail, but it will be useful at least to lay out in a diagram (Figure 1) the alternative approaches we all are using now. Three approaches are depicted. One is the time-honored *KAP approach* of fertility and family planning surveys beginning in the 1960s, which began with the assumption, thought to be more or less accurate, that most sex and pregnancy and birthing occurred in marital unions, so that sexual and fertility questions could be asked only of the "ever-married" or sometimes the "currently married." Once current marital status was obtained, the interview proceeded. The underlying assumptions have long since been cast out by further thought and new data, and so has the approach to measurement. The current *DHS approach* deals with this vexing problem essentially by ignoring current marital status. In the DHS interview current marital status appears late in the sequence of questions, preceded by detailed questioning on all pregnancies and on live births. Long before union status is determined, respondents have been asked if they have ever given birth, if they have ever had a pregnancy, if they have ever tried to control conception, and the ages at which all these events occurred. The section on "nuptiality" asks if the respondent has "ever been married or lived with a man," or "ever had sexual intercourse," and whether "now married or living with a man, or now widowed, divorced, or no longer living together." The timing of first union formation is determined by asking about having been married "...more than once," and for the first union obtaining "month and year started with first husband/partner" and the woman's age at that time. There are instructions to calculate for the consistency of year of birth, age at marriage, and implied year of marriage formation, and to probe for consistent information when necessary. With data of this kind, it is possible to define "premarital sex", conceptions and births, based on whatever the respondent may have understood by "married or lived with a man." The rationale is that respondents are more likely to report "premarital" sexual on conception events when they are given simply as events, outside the context of union status—and the implication that one's status may have been inappropriate at the time.

The third approach I am calling the young adult reproductive health survey (YARHS) approach. In the YARHS one begins with direct questions on current marital status, allowing the respondent to present himself (Goffman 1956) as single or married in whatever way is comfortable. The questionnaire divides along two tracks for those who identify as never married and ever married. But, on both tracks, essentially the same core set of questions is asked about sexual experience, pregnancies, births, and the like. In addition there are questions (often quite specific to each cultural and institutional setting), about the institutions and arrangements surrounding the personal history of partnering and sexual experience. That is, the initial presentation of self is queried, interrogated. It has been shown in one setting at least (Xenos, Raymundo, and Berja 1999) that this approach identifies

more premarital sexual experience and our inference is that its results are probably more accurate. This is obviously an important area for methodological experimentation so we can converge on an approach that all can accept and use with confidence.

Measurement on Issues Specific to Youth

I noted earlier that general demographic (including DHS) questionnaires do not encompass many of the issues of direct relevance to youth. This is not the place for a full discussion and prioritizing of the areas that ought to be covered, but I will illustrate some of the possibilities that the Asian YARH survey teams have prioritized. Figure 2 lists topic areas under the rubric “Proximate Contexts and Institutions.” If the goal of analysis is to understand risk behaviors such as premarital sex, unprotected sex, very early marriage and the like, then these proximate contexts and institutions are in causal terms immediately prior to, and operate through, the most immediate influences on behavior. There is growing evidence on the importance of the contexts and institutions surrounding youth, from the information and misinformation provided by peers (Flanagan, Williams, and Mahler 1996), to the powerful impacts of the mass media (Thapa and Mishra 2001), to the protective force afforded by intact and well-functioning families (Blum and Rinehart 1997; Jessor, Turbin, and Costa 1998, 1999). A compilation of possible questionnaire items designed specially for YARH questionnaires has been prepared by a FRONTIERS/HORIZONS team (Gipson and Mathur 1999), and another compilation is presently being prepared by the World Health Organization. The AYARR project web site (URL provided earlier) includes the questionnaires from all the AYARR national surveys.

There is a final important point about the substantive content of YARH surveys. It is generally recognized that during the teen and youth years of life a transition to adulthood is occurring, and that much can be understood about youth risk behaviors by understanding the transition events and their influences. This has been an important organizing theme in the Asian YARH surveys (Xenos et. al 2001; 2001) as it has been in many other studies of youth (Murray 2001; Mensch, Bruce, and Greene 1998; Domingo 1982; Cheung 1983). To examine transitions to adulthood event history information is required, and Figure 3 indicates the sort of information that has been collected in the Asian YARH surveys just to take one set of examples.

Information for Program and Policy Design and Outcome Assessment

The FOCUS *Guide to Monitoring and Evaluating Adolescent Reproductive Health Programs* (Adamchak et al. 2000) includes four tables of adolescent reproductive health indicators suitable for all aspects of program management from design through outcome assessment and drawing on a variety of data sources including surveys. This carefully conceived inventory gives us a framework against which to consider the potential contributions of surveys to all phases of program management. I will review the framework briefly and then turn to the Asian YARH surveys to illustrate survey data for programs. Four categories of indicator are presented reflecting stages in the programming process: Program Design; Program Systems Development and Functioning; Program Implementation; and Program Intervention Outcome [assessment].

Program Design indicators reflect a set of “design process elements,” both cross-cutting and program specific, and the data sources indicated primarily include program records, log books and other program documents. Among the indicators for specific program areas (such as health facility programs and school-based programs) are several for which a survey source is indicated. These cover indicators for “assessment of needs and preferences of target youth audience(s),” and “assessment of physical infrastructure for ARH services.” The program area labeled “Mass Media and Social

Marketing Programs” is judged especially likely to benefit from survey data, including information for “formative assessment of target audience,” “segmentation of target audience,” “analysis of behavioral practices,” and “analysis of factors influencing youth behavior.”

Program System Development and Functioning indicators cover the areas of “management,” “program sites, equipment and supplies,” “staff development and supervision,” “community mobilization,” and indicators in a series of specific program areas (health, curriculum development, youth center programs, and the like). Data sources here are dominated by program documents, including management information systems (MIS), and various kinds of interviews with staff. Survey data are indicated in connection with specific programs for the purpose of assessing knowledge of a facility’s existence and the adequacy of its location, hours promoted/publicized to potential youth clients.

Program Implementation indicators reflect intermediate products of the program effort. This includes measures of the amount of counseling carried out by program staff, skill training among the target audience, and community mobilization activities. Also, there are measures related to specific program areas, for example numbers of youth served by health clinics (and the proportions of those who report favorably on the services received), numbers of youth in target audiences who recall a reproductive health message in the mass media, who understand that message, or who report favorably about it, and percentages reporting positively on youth center activities or would recommend that center to a friend. For these three program examples survey data are considered relevant.

Program Intervention Outcome Indicators are statistics on the target population. When measured before and after program efforts and with suitable attention to representativeness and adequate measurement, change can be measured. To assess program impact, however, much more is needed. In an experimental situation youth (or, say, local catchment areas) would be assigned randomly to control and program groups. Statistically significant differences between these would then reflect program impacts. Experimental assignment in this fashion is rare outside of clinical situations. The practical substitute is “quasi-experimental” situations where assignment to control and program groups is not random, but there are statistical controls on population and locality characteristics that might influence the outcomes of interest.

Quasi-experimental impact assessment requires valid and reliable measurement of a considerable set of relevant characteristics, and the method of choice for obtaining this information for a catchment area or target population is the survey. The *Guide* offers a very thorough and useful compilation of such elements of the social setting surrounding youth. Since virtually everything on this list can be obtained through surveys, the list is summarized here in Table 3. It is useful to distinguish two sets of information from this list. One set is behavioral outcomes such as sexual activity, condom use, and the like. The other is information linking respondents and program activity in very specific ways. YARH surveys provide a rich array of behavioral information. But, most surveys—even YARH surveys dedicated to youth issues—do not include very much directly relating respondents to programs. Much more can be done to realize the potential for direct questioning in surveys about contact with or awareness of specific program activities or policies.

Most surveys fall well short of exploiting the potential that exists. Among the six AYARR surveys, for example, only the Nepal Adolescent and Youth Adult (NAYA) survey goes a credible distance in this direction. There are 32 questions out of the many tapping in some manner a respondent’s connection with, knowledge of, or past experience with, organized services, sources of information and the like (not including media sources). The NAYA questions linking respondents and program efforts in some fashion are summarized in Table 4. This example, like so many surveys of this kind, are relatively strong on the types of program awareness, attitudes or contact measured, but

relatively weak on the range of program areas covered in this manner. Also, many of these surveys ask generic questions about “abortion services” and the like rather than about specific delivery modes and organizations. Much more can be done.

But Nepal’s NAYA also illustrates a nearly general problem with this use of large-scale survey inquiry. Most young adult information and services in Nepal are delivered by non-government organizations, and most of these are working in a relatively small number of, and generally different, localities on a pilot basis. Questions about a specific program or agency will be relevant only in a small geographic part of the total sample if at all.

Other questions asked in one or another of the AYARR surveys provide valuable information on the effectiveness and broadness of reach of large-scale programs—media efforts, or national rural health systems, for example.

Final Comments

At the outset I gave myself the task of outlining contributions to program design and evaluation of the “YARH survey,” defined as being of relatively large if not national scale. Such surveys have many strengths. They can have national impact and bring attention to issues that would otherwise go unnoticed in the media and elsewhere. Such surveys can provide population-based estimates of important demographic and social planning parameters with relatively small errors of estimation. When the samples are large enough, they can provide disaggregation on geographic or social axes and therefore estimates for important sub-groups of the population. Large-scale surveys are usually multiple-purpose affairs, achieving cost-effectiveness by doing many things with one large investment of funds. Moreover, many (alas, not all) large-scale surveys are carried out at a very high technical level, in terms of sample and questionnaire design, for example. Finally, such a multi-faceted design effort over a period of time necessarily involves many and creates a diverse constituency of stakeholders in the project and its results. With the very best large-scale surveys the process involves potential users of the resulting data and incorporates their needs from the very beginning.

However, big is not always the right scale for the goals at hand. And certainly, much that we want to know should be discovered using other methods. The conclusions of a UNAIDS study group on data needs for HIV/AIDS programming (Pisani et al. 1998)—favoring a mix of data systems, large and small-scale, based on both quantitative and qualitative methods—apply to youth reproductive health data needs as well.

I want to finish up, by identifying a survey/program dilemma and suggesting that this be considered an opportunity. Large surveys are more or less national in scope and somewhat generic in their content. But programs are often local, and always very specific in terms of what they are trying to do and how that effort could be assisted or assessed with data. Large-scale survey efforts can devote significant resources to achieving data quality, but smaller survey efforts often cannot. Large-scale surveys serve multiple purposes, but a program often needs very specific kinds of information from a survey. The best survey contributions to program design and evaluation will clearly reflect a two-way process—the bridge built from the two ends which I mentioned earlier—leading to surveys designed at the appropriate scale, incorporating carefully conceived sampling designs and technically sound questionnaires, and with content that reflects consultation to maximize the relevance of the estimates that are provided. The technical level of the best large-scale surveys must be aimed for at all scales of research. The arguments for methodological care are probably even strong at the smaller scales. But the large-scale efforts can do much more than they do to provide specific results of relevance to programs. This requires intensive consultation with stakeholders from the earliest stages of design, and

a great deal of forward planning of the program-relevant analyses so the required population sub-groups and sample sizes are available.

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**Table 1. Countries with DHS Surveys for Two or More Dates
(The Two Most Recent Dates are Shown)**

(The Two Most Recent Dates are Shown)					Representation of Youth Cohort	
Country	Dates	Years Spanned	Sample Size		Female	Male
			First Date	Second Date		
Sub-Saharan Africa						
Benin	1996-2001	5	5,491	7,000		
Burkina Faso	1992-1998/99	6	6,354	6,445		
Cameroon	1991-1998	7	3,871	5,501		c
Ghana	1988-1998	10	4,488	4,843		c
Guinea	1992-1999	7	6,065	6,753		
Kenya	1983-1998	10	7,540	7,881		
Madagascar	1992-2002	10	6,260	7,500		d
Malawi	1992-2000	8	4,850	1,322		
Mali	1987-2001	14	3,200	1,281		
Namibia	1992-2000	8	5,421	6,755		d
Niger	1992-1998	6	6,503	7,577		c
Nigeria	1990-1999	9	8,781	9,810		d
Rwanda	1992-2000	8	6,551	1,042		c
Senegal	1986-1999	13	4,415	1,718		d
Tanzania	1992-1999	7	9,238	4,029		
Togo	1988-1998	10	3,360	8,569		d
Uganda	1988-2000	12	4,730	7,246		d
Zambia	1992-2001	9	7,060	8,000		d
Zimbabwe	1988-1999	11	4,201	5,907		d
Near East/N. Africa						
Egypt	1988-2000	12	8,911	1,557		e
Jordan	1990-1997	7	6,461	5,548		d
Morocco	1987-1995	8	5,982	4,753	a	e
Yemen	1991/92-1997	5	5,687	1,041		e
Europe/Eurasia						
Turkey	1993-1998	5	6,519	8,576	b	c,d
Asia						
Bangladesh	1993/94-2000	6	9,640	1,054		c,d
India	1993-1999	6	8,977	9,030		e
Indonesia	1987-1997	10	1,188	2,881		e
Nepal	1987-2001	14	1,630	8,726		d
Philippines	1993-1998	5	1,502	1,398		e
Latin America & Caribbean						
Bolivia	1989-1998	9	7,923	1,118		d
Brazil	1986-1996	10	5,892	1,261		d
Colombia	1986-2000	14	5,329	1,158		e
Dominican Rep.	1986-1999	13	3,885	1,286		d
Guatemala	1987-1998/99	11	5,160	6,021		e
Haiti	1994/95-2000	5	5,356	1,015		
Peru	1986-2000	14	2,534	2,784		e

Notes:

- All females on second date only.
- Currently married only on first date.
- Husbands only on one or both dates.
- No males on one date.
- No males on both dates.



Full YARH information	
Only for currently married females	

Table 2. Indicators of the Distribution of Youth Across Households

Country (year)	Indicators					
	% of Households with 0 Youth	Youth per Household		% of Youth in Households with...		
		All Households	Households with Youth	No Other Youth	4 or More Youth	Only Youth
Bangladesh (1996)	38.0	1.00	2.63	37.5	13.4	0.9
India (1992)	41.2	1.07	2.59	27.4	17.8	1.0
Indonesia (1994)	49.5	0.82	1.67	35.0	12.0	2.9
Nepal (1996)	44.7	0.95	2.12	31.6	15.0	1.7
Pakistan (1991)	43.1	1.16	2.69	21.4	28.0	0.8
Philippines (1993)	44.7	1.05	2.35	24.2	20.1	1.1
Sri Lanka (1987)	49.8	0.95	1.91	25.3	20.9	0.0
Thailand (1987)	43.6	1.10	2.52	22.9	21.5	3.2

Source: DHS household files

**Table 3. FOCUS on Youth Recommended Indicators
of Program Intervention Outcomes**

INDICATORS (no. of items in parentheses)
Individual Outcome Indicators
Knowledge (4)
Attitudes, Beliefs and Values (2)
Intentions (6)
Self-Efficacy (6)
Skills (2)
Behaviors
Sexual Activity (7)
Sex with Same-Sex Partners (5)
Sexual Abuse, Coercion and Exchange (4)
Contraception and Condom Use (7)
Pregnancy (13)
Sexually Transmitted Infections (8)
Drug and Alcohol Use (11)
Emotions/Behaviors that May Lead to Other Risky Behaviors (8)
Marriage (3)
Parenting (4)
Relationship Outcome Indicators
Peer/Partner Characteristics
Communication and Information from Peers (2)
Perceptions of Peer Attitudes/Behaviors (7)
Partner Relations (8)
Family
Family Dynamics (9)
Family Attitudes, Beliefs and Values (12)
Institutional Outcome Indicators
Religiosity (3)
Education/Schooling (8)

Source: Extracted from Adamchak (2000), Indicator Table IV.

Table 4. Nepal NAYA Survey Questions Linking Youth Respondents and Program Activities

Program Area/ Topic	Participated? Received?	Actual source of supplies	Actual source of information	Actually talk with	Likely to talk with	Know of a program	Usually talk with	Know of as a source	Knowledge of	Should do	Sought advice from	Appropriate as a delivery method
Literacy program	A15											
<i>Puberty changes</i>			D4									
<i>Sexual matters</i>					G2		G4					
Medical service-miscarriage	H7											
Medical service-abortion	H8							I36				
Medical service-antinatal	H21, H23											
Medical service-tenanus shot	H25											
Medical service-general	H29											
Contraceptive methods			I3									
Condom supplies		I22										
<i>Laws</i>									I40, I41			
Health problems					J1							
<i>Sexually transmitted infections</i>				J12						J9, J10	J14-J15	
<i>HIV/AIDS</i>			J16	J22								
Medical service-HIV/AIDS								J27				
<i>Sex education</i>												L29 L30
Trafficking of women						M13-M15						
<i>Depression</i>							N14					
Volunteerism	N15, N17, N18, NJ21											

Figure 1. Surveying Youth: Contrasting Approaches

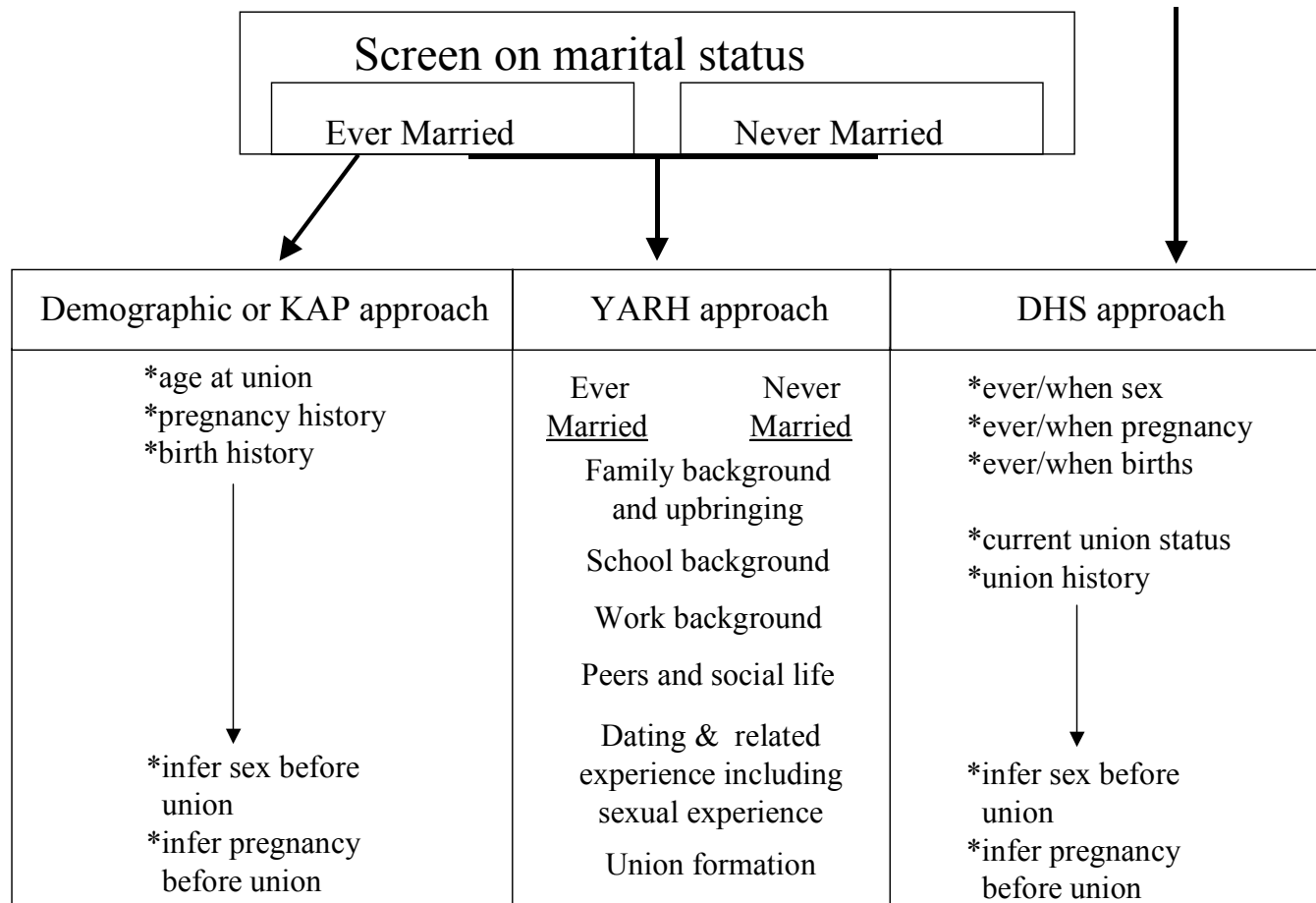


Figure 2. Topic: Proximate Contexts and Institutions

(X indicates that one or multiple questions on the topic are asked)

TOPIC	Country	Hong Kong				Taiwan	Indonesia	Philippines		Thailand	
	Date	1981	1986	1991	1996	1994	1998	1982	1994	1990	1994
Proximate Contexts and Institutions											
Media exposure				X	X	X	X	X	X	X	X
Population/sex education			X		X	X	X	X	X		
Family											
Characteristics		X	X	X	X	X	X	X	X		X
Relationships		X	X	X	X	X	X	X	X		X
Friends			X	X	X		X	X	X		X
Dating and courtship		X	X			X	X	X	X		X
Marriage											
Attitudes		X	X	X	X	X	X	X	X		X
Behaviors			X			X	X	X	X	X	
Dormitory/boarding experience								X	X		X

Figure 3. Event Information in the AYARR Surveys

Event: Age at...	Country				
	Hong Kong	Philippines	Thailand	Indonesia	Nepal
puberty	M F	M F	M F		F
left school	M F	M F	M F		M F
first crush		M F			
first admired		M F			M F
first boy/girlfriend		M F	M F	M F	
first date	M F	M F			
first kissed	M F				
first cohabitation		M F			M F
first marriage	M F	M F	M F	M F	M F

Event Information in the AYARR Surveys (continued)

Event: Age at...	Country									
	Hong Kong		Philippines		Thailand		Indonesia		Nepal	
first pre-marital sex	M	F	M	F	M	F	M	F	M	F
first sex	M	F	M	F	M	F	M	F	M	F
first sex with CSW	M		M		M					
first pregnancy		F		F				F		F
first birth						F		F		F
left home	M	F	M	F	M	F			M	F
first work	M	F			M	F			M	F
first smoked			M	F	M	F	M	F	M	F
first drank			M	F	M	F	M	F	M	F
first used drugs			M	F	M	F	M	F		